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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,414	02/28/2002	Ravinder Aggarwal	ASMEX.200A	6198

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EXAMINER

Keenan, James W

ART UNIT PAPER NUMBER

3652

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/090,414	Applicant(s) AGGARWAL ET AL. SJ	
	Examiner James Keenan	Art Unit 3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7-18,20-30 and 32 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 24-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-13,15-18,20-23,29,30 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3652

1. Claims 14 and 24-28 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim.

2. Claim 1 is objected to because of the following informalities: in line 7, a comma should be inserted after "a wheel". Appropriate correction is required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 29-30 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 29, lines 8-9, it is not clear what is meant by "above one of the shelves with the wafer carrier to interfere with the rotation of the shelf";

and in line 10, "the wafer carrier port" lacks antecedent basis.

In claim 32, lines 6 and 8, the phrase "supported for rotation within the frame" is repeated.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3652

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4, 5, 7-13, 15-18, 20-23, 29, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al (US 6,447,232).

Davis et al show a buffering system for use in a wafer processing environment, including a frame shown in figure 1B to which an inventory subassembly 90 having shelves 97, 98 for holding wafer carriers 51 thereon is mounted for rotation about a horizontal axis, an I/O station 32 for loading and unloading the wafer carriers to and from the buffering system, drive mechanism 104, and wafer carrier port 180 in communication with a wafer handling chamber 20. Also note wafer carrier transfer mechanism 60 which moves along a horizontal axis 70 and pivots about a vertical axis 83.

Although the inventory subassembly is not a "wheel", it does have a similar structure in that it comprises a central hub to which are attached radial arms (spokes), and it operates in a manner analogous to a wheel.

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Davis et al by constructing the inventory subassembly as a wheel, as this would be a mere design expediency which would have no effect on the overall design or operation of the system.

Although the wafer carrier transfer mechanism utilizes its own vertical movement to transfer wafer carriers to and from the shelves on the inventory subassembly, it would have been an obvious design expediency to utilize the rotational movement of the inventory subassembly to accomplish the same result.

Re claim 10, to have utilized open cassettes in a closed environment is a well known choice of design.

Re claim 12, hanging the wafer carriers from the shelves is an obvious alternate equivalency.

Re claim 13, the addition of a second I/O station is considered an obvious design expediency for improving throughput.

Re claims 16-18, note that two hatch interfaces 180 (wafer carrier ports) and two container transfer subassemblies 150 (wafer carrier transfer mechanisms) are disclosed (see col. 9, lines 18-25).

Re claims 21-22, note robot 280.

7. Applicant's arguments filed 7/9/04 have been fully considered but they are not persuasive.

Applicant argues that the present invention eliminates the need for Davis' pivotal movement of the loading plate to transfer wafer carriers onto the shelves, stating that "omission of an element and retention of its function is an indicia of unobviousness". This is not persuasive. Applicant's invention may omit the pivotal movement of the loading plate of Davis, but it does not retain the (exact) function thereof. The reason for the pivotal movement of Davis' loading plate is due to the fact that the orientation of the wafer carriers is changed 90 degrees from the position at which they are received in the buffering system to the position in which the wafers are removed from the wafer carriers. While it is true that this requires an extra positioning step compared to

Art Unit: 3652

applicant's invention, this is due to the layout of Davis' processing system in general, and not because the wafer carriers have to be transferred to the shelves by rotating the loading plate in particular. In other words, the orientation of the wafer carriers could be changed anywhere in the system, either before or after transfer from the loading plate to the shelves. Thus, if some other part of Davis' apparatus handled this orientation step, or if it was determined that reorientation was unnecessary, the transfer of wafer carriers to the shelves would be substantially the same as applicant's invention.

Applicant also argues regarding new claim 32 (as well as claim 15) that Davis does not load wafer carriers directly onto the shelves. However, since the claim doesn't require the wafer carriers to be loaded directly from anywhere or anything in particular, this can hardly be considered to define over the reference.

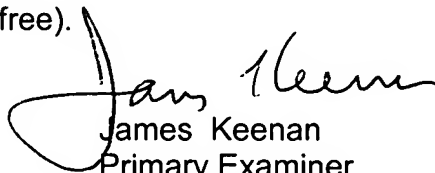
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 703-308-2559. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James Keenan
Primary Examiner
Art Unit 3652

jwk
10/06/04